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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,530	09/16/2003	H. Britton Sanderford JR.	241569US20CONT	1703
22850	7590	02/13/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER LU, JIA	
			ART UNIT	PAPER NUMBER
			2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/13/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/662,530

Applicant(s)

SANDERFORD ET AL.

Examiner

Jia Lu

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9, 12, 14-16, 19, 22 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 1-8, 10, 11, 13, 17, 18, 20, 21 and 23-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claim 31 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected system, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/21/2006.

### ***Claim Objections***

2. Claims 1, 10, 17, 21 are objected to because of the following informalities:  
acronyms including "QAM" and "ALOHA" should be properly spelled out.  
Appropriate correction is required.
3. Claims 2-8, 10-30 objected to based on objected base claims.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term is indefinite because the specification does not clearly redefine the term. The terms "strong" and "weak" in claim 14 are relative terms which renders the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for

ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in "Fiber Optic Microcellular Radio", in view of US patent 6,827,265. Chu shows a plurality of first nodes to transmit a first data packet (figure 1, car and other cars not shown); a first base station and a second base station locationally dispersed from the first base station to receive transmitted signals (Figure 1, canisters); and a data concentrator (figure 1, "switching office" and figure 3), the first base station and the second base station are arranged in a configuration such that a first

coverage area of the first base station at least partially overlaps a second coverage area of the second base station, the first base station and the second base station each receive the first data packet transmitted by at least one of the plurality of first nodes, and the data concentrator is configured to collect the first data packet received by the first base station and the first data packet received by the second base station. (figure 1, page 2). While Chu does not describe the plurality of first nodes to be configured to transmit using a duty cycle of less than 0.1% and to transmit a unique identification parameter, it would be obvious to one ordinarily skilled in the art to lower the duty cycles in a system consisting of multiple nodes transmitting simultaneously in order to achieve many benefits including saving transmission power while increasing peak transmission power (see '265, column 331, lines 20-30).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in "Fiber Optic Microcellular Radio", in view of US patent 6,827,265, further in view of US patent 6347223. Regarding claim 12, Chu describes the invention to comprise mobile radio communications, which is well known in the art to include narrow-band radio transmissions (see '223 column 1, line 20-25). It would be obvious to one ordinarily skilled in the art to include narrow-band frequency bands in Chu's invention in order to make more efficient use of the wide spectrum of frequencies in communicating.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in "Fiber Optic Microcellular Radio," in view of US patent 6,827,265, further in view of Arredondo et al in "Techniques for improving in-building radio coverage using fiber-fed distributed antenna networks." While Chu does not describe aborting signals received with poor quality, 'Arredondo describes this by not selecting certain signals of lower quality (page 1541, left column) and therefore aborting their reception, and it would be obvious to one ordinarily skilled in the art to include this feature in Chu's invention in order to eliminate weak signals earlier to save processing power and increasing processing speed.
8. Claims 16, 19, 22, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in "Fiber Optic Microcellular Radio," in view of US patent 6,827,265, further in view of US patent 6,492,910. While Chu does not disclose the redundant re-transmission of data, such a feature is well known in the art for use in meter reporting (as shown by '910, column 2, lines 1-4, 15-18). It would be obvious to one ordinarily skilled in the art to include this feature in Chu's invention in order to correct missing or error transmissions and improve overall system performance.

***Allowable Subject Matter***

9. Claims 10, 11, 13, 17, 18, 20-21, 23-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jia Lu whose telephone number is 571-272-6042. The examiner can normally be reached on 8:30-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
DAVID C. PAYNE  
PRIMARY PATENT EXAMINER

Jia Lu  
Examiner  
Art Unit 2611